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Varieties of Cereal and Oilseed Crops for Alberta – 1992

Prepared by the Cereal and Oilseed Advisory Committee of Alberta Agriculture

Explanatory

The information used in this publication is supplied by the University of Alberta, Agriculture Canada, Canadian Seed Growers Association, Canadian Seed Trade Association and Alberta Agriculture. This publication provides information on individual varieties and indicates cereal and oilseed production areas within the province. Important agronomic characteristics are given in tabular form for varieties of wheat, oats, barley, flax, canola, triticale, and rye. The Production areas, based primarily upon precipitation and length of growing season, are indicated on the map. With this information farmers can choose varieties that may be best suited to their own particular farming programs. The varieties are tested under medium management conditions and may change their response if tested under very high or very low management.

Yields

The tables show relative yields for six production areas. In area 1, irrigated yields expressed as a per cent of dryland yields are: C.W. Wheat 185, barley 160, oats 180, flax 210, canola 125. In area 2, irrigated yields expressed as a per cent of dryland yields are: C.W. wheat 130, barley 125, oats 120, flax 145, canola 120.

Maturity

The relative classifications refer specifically to the crop being considered. For example, an early-maturing wheat variety could require more days to reach maturity than a late-maturing variety of barley.
In areas 2, 3, and 5 of Alberta the following may be used as a guide for estimating maturity in actual days from seeding to harvest when the crops are seeded on fallow land: Neepawa wheat - 120 days, Park - 116, Grizzly oats - 114, Jasper - 106, Galt barley - 105, Harrington – 106, Otal - 94, McGregor flax - 130, Noralta - 117, Westar canola - 112, and Tobin - 95 days. In area 6 the longer daylight hours usually reduce the number of days to maturity required. Area 4 has the longest requirement in the province for days to maturity. In southern Alberta, Neepawa can be expected to mature in 100 to 105 days and other crops are similarly earlier maturing. The comparison among varieties within crops, however, tend to remain fairly uniform regardless of where the crops are grown.

Disease, seed treatment

- Seed of rye and flax should be treated to control seedling blight and seed of canola to control flea beetles, seedling blight and the seedborne phase of virulent blackleg.
- Cereal smuts can be controlled with systemic seed treatment fungicides. See Alberta Agriculture publication "Seed Treatment of Cereal and Oilseed Crops Agdex 100/632".
- Treated seed must not be fed to livestock or poultry of sold for feed. Refer to label for maximum period for storing treated seed. Storage periods for fungicide-insecticide combination products are fairly short. Small quantities of excess seed can be buried at regional landfills. Do not expose treated seed to wildlife!

Good seed

- In relation to total farm input expenses, the cost of GOOD SEED, a most important factor, is very small.
- The only way to be absolutely sure of obtaining a particular variety is by the use of PEDIGREED SEED.
- Pedigreed seed may be purchased in bulk from authorized suppliers.

Copies of this and related publications may be obtained from the Print Media Branch, Alberta Agriculture, 7000 - 113 Street, Edmonton, Alberta T6H 5T6 or Alberta Agriculture's District Offices.

COMPARISON OF VARIETIES

WHEAT

Variety	Irr. 1 & 2	Area (See Map) 1	2	3	4	5	6	Rel Mat	T. Wt.	K. Wt.	Resistance to: Ldg.	Shat.	Loose Smut	Bunt	Com. Rt	Rot
	Yield as % of Neepawa									ELIGIBLE FOR C.W. RED WHEAT GRADES						
Columbus	99	99	100	98	101	98	102	M-L	77	35	G	G	I	R		I
Conway	100	98	99	98	99	98	100	M	76	33	G	G	R	I		I
Katepwa	100	98	99	94	96	92	95	M	76	33	G	G	R	R		I
Kenyon	99	99	100	93	98	95	97	M	76	32	G	G	I	I		
Lancer	95	94	89	89	–	–	–	M-L	76	34	P	G	R	R		I
Laura	102	102	103	98	103	102	108	M-L	76	33	G	G	I	S		I
Leader	93	96	98	93	–	–	–	M-L	77	31	G	G	I	R		S
Neepawa	100	100	100	100	100	100	100	M	76	33	G	G	R	I		I
Park	–	–	97	88	95	91	96	E	77	33	F	G	R	I		
Roblin	97	92	101	92	102	96	98	M-E	76	35	G	G	R	S		I

REMARKS: LEADER & LANCER – recommended for sawfly areas only. COLUMBUS & LAURA – late maturing in Areas 3, 4, 5 and 6. NEEPAWA – difficult to thresh. COLUMBUS & LEADER – have sprouting resistance. LAURA & ROBLIN – require a systemic fungicide seed treatment. AC MINTO, CDC MAKWA, CDC TEAL & PASQUA – insufficient test data to describe. CDC TEAL – seed not available in 1992. C.W. Red Spring Wheat grown under irrigation tends to have lower grades.

	Yield as % of Biggar									ELIGIBLE FOR CANADA PRAIRIE SPRING WHEAT GRADES						
Biggar	100	100	100	100	100	–	–	V-L	77	37	G	G	S	S		I
Cutler	–	–	–	–	97	72	85	V-E	76	37	G	G	S	S		I
Genesis	–	99	91	97	–	–	–	V-L	74	40	P	G	I	S		I
Oslo	87	79	82	86	97	87	84	M	73	39	Ex	G	S	I		S

REMARKS: BIGGAR, CUTLER, GENESIS & OSLO – require a systemic fungicide seed treatment. OSLO & CUTLER – less drought tolerent than Biggar. BIGGAR, CUTLER & OSLO – red-seeded, semi-drawf varieties. GENESIS – white-seeded, standard height variety which may be subject to yield and quality reduction due to lodging, late maturity and sprouting susceptibility in high rainfall areas. BIGGAR – yields about 20% higher than Neepawa. AC TABER (HY380) – insufficient test data to describe, seed not available in 1992. CUTLER – seed supply limited in 1992.

	Yield as % of Fielder									ELIGIBLE FOR C.W.SOFT WHITE SPRING WHEAT GRADES						
Fielder	100	–	–	–	–	–	–	L	74	34	G	F	S	S		S
SWS-52	95	–	–	–	–	–	–	L	73	31	G	G	S	S		S

REMARKS: SWS-52 – received a one year interm registration renewable until 1993. FIELDER and SWS-52 – semi-dwarf varieties requiring a systemic fungicide seed treatment. SWS-52 and SWS-87 are resistant to stripe rust. FIELDER – yields about 11% higher than Neepawa in areas of adaptation. SWS-87 – insufficient test data to describe, seed not available until 1994.

	Yield as % of Wakooma									ELIGIBLE FOR C. W. AMBER WHEAT GRADES						
Kyle	103	109	102	102	–	–	–	L	75	43	P	G	S	R		I
Medora	101	100	100	101	–	–	–	M-L	75	43	G	G	I	R		I
Sceptre	103	103	109	100	–	–	–	M	74	42	G	G	S	R		
Wakooma	100	100	100	100	–	–	–	M-L	75	42	P	G	I	R		I

REMARKS: KYLE, MEDORA & WAKOOMA, – should be grown only in Area 1 and 2 and the southeastern portion of Area 3 because of late maturity. WAKOOMA – yields about 11% more than Neepawa in areas of adaptation. SCEPTRE – Lowest incidence of kernel smudge. PLENTY – insufficient test data to describe.

	Yield as % of Norstar									ELIGIBLE FOR C. W. RED WINTER WHEAT GRADES						
Norstar	–	100	XX	XX	–	–	–	E	79	30	P	G	S	S		S
Norwin	116	104	–	–	–	–	–	E	80	30	F	F	S	S		S

REMARKS: Varieties listed with winter hardiest at the top. Winter survival is best in southwestern Alberta. NORWIN – has very short straw, sensitive to mid-season drought; not recommended for light soils, dry fall conditions or where yields lower than 40 bu/ac (2.5 t/ha) are common. Winter wheats are susceptible to Russian wheat aphids. AC READYMADE & CDC KESTREL – insufficient test data to describe, seed not available in 1992.

FALL RYE

Variety	Yield as % of Kodiak Irr. 1 & 2	Area (See Map) 1	2	3	4	5	6	Rel Mat	T. Wt.	K. Wt.	Straw Strenght	Stem Smut
Musketeer	–	110	101	XX	XX	100	XX	M	71	30	F	R
Prima	–	115	107	XX	XX	108	XX	M	71	30	F	I
Kodiak	–	100	100	XX	XX	100	XX	M	68	30	F	R
Danko	–	103	113	XX	XX	XX	XX	M-L	72	32	F	XX

REMARKS: Stem smut – Use systemic fungicides in high risk areas on all varieties. Varieties listed with the winter hardiness at the top. Yield information is based on limited data. DANKO – has winter hardiness between fall rye and Norstar winter wheat.

Symbols used: – Denotes variety not generally suited to area; XX Denotes insufficient test data to describe.
Abbreviations used: Rel Mat=Relative maturity; V-L=Very-late, L=Late, M-L=Medium-late, M=Medium, M-E=Medium-early, E=Early; T. Wt.=Test weight (kg/hl); K. Wt.=Kernel weight (grams/1000 kernels); Ldg.=Lodging; Shat.=Shattering; Ex=Excellent, G = Good, F=Fair, P=Poor; Com. Rt. Rot=Common root rot; R=Resistant, I=Intermediate, S=Susceptible. Multiply kg/hl by 0.8 to get pounds per bushel.

BARLEY

Variety	Yield as % of Galt: Irr. 1&2	Area (See Map) 1	2	3	4	5	6	Rel Mat	No. of Row	Awn Type	T. Wt.	K. Wt.	Resistance to: Ldg.	Shat.	Loose Smut	FL & Cov. Smut	Com. Root Rot	Scald	Net Blt.
ELIGIBLE FOR GENERAL PURPOSE GRADES ONLY																			
Abee	88	106	100	96	97	108	99	L	2	R	65	42	F	G	S	I	I	S	S
AC Stacey	–	–	–	–	94	97	95	E	6	R	61	34	F	F	S	R	S	R	I
Bridge	103	106	102	102	101	104	98	L	2	R	66	46	G	F	S	I	I	S	S
Brier	101	112	109	106	107	121	114	M	6	S	60	38	F	F	S	R	S	I	I
Deuce*	98	103	95	93	93	99	94	M	2	R	66	42	G	G	S	R	I	S	S
Galt	100	100	100	100	100	100	100	M	6	S	60	37	G	F	S	R	S	S	S
Heartland	108	106	105	100	102	102	103	M	6	S	60	36	G	F	S	I	I	S	I
Jackson	–	–	–	–	91	91	97	E	6	R	62	38	G	F	S	S	I	S	S
Johnson	93	106	104	107	99	115	113	L	6	S	61	36	P	G	S	S	S	R	S
Leduc	106	106	106	103	102	109	102	M	6	R	60	41	F	G	I	R	I	R	I
Noble	105	111	106	104	105	106	110	M	6	S	59	37	G	F	S	I	S	S	S
Otal*	–	–	–	–	83	87	87	E	6	R	62	33	P	P	S	I	S	S	S
Virden	104	110	108	101	104	109	113	L	6	S	59	43	G	G	S	I	R	S	I
Winthrop	96	98	95	99	100	105	99	M	2	R	66	43	G	F	S	R	S	S	S
SEMI-DWARF																			
Duke	104	103	106	98	108	104	106	L	6	R	61	38	Ex	F	S	I	I	R	S
Samson	98	95	99	91	102	96	101	L	6	R	59	35	Ex	G	S	I	I	S	S
Winchester	103	99	104	92	95	95	95	M	6	S	60	41	Ex	G	S	R	I	R	I
HULL-LESS																			
CDC Buck	88	79	84	86	93	83	97	M	6	R	71	33	G	G	S	S	I	S	S
CDC Richard	82	91	86	87	86	93	88	M	2	R	74	38	P	G	S	I	I	R	S
Condor	82	87	79	79	78	84	83	M	2	R	75	36	G	G	S	S	S	S	S
ELIGIBLE FOR MALTING GRADES																			
Argyle	93	94	93	98	98	95	97	M	6	S	60	35	G	F	S	S	I	S	S
Bonanza	91	96	95	95	94	94	94	M	6	S	60	36	G	F	S	S	I	S	S
B 1602	97	96	96	94	97	99	96	M	6	R	63	37	G	F	S	I	I	S	S
Creme	97	98	107	104	104	102	106	M	6	R	60	37	P	F	S	I	I	S	S
Duel	101	105	106	106	104	105	109	M	6	S	60	37	G	F	S	I	I	S	S
Harrington	96	102	94	95	87	106	97	M	2	R	63	42	G	F	S	S	I	S	S
Klages*	84	98	91	95	88	105	98	L	2	R	64	42	G	F	S	R	I	S	S
Manley	94	103	100	100	97	110	104	V-L	2	R	64	42	G	F	S	I	I	S	I
Stein	97	99	95	98	94	105	98	M	2	R	65	42	G	F	S	I	I	S	S

REMARKS: Smuts can be controlled with systemic seed treatment fungicides. Semi-Dwarfs respond to high levels of management and can yield up to 50% more than Galt. ARGYLE & OTAL – show primarily head breakage while the other varieties show primarily kernel shattering. B1215 – Seed supply limited in 1992.

SPRING TRITICALE

Variety	Yield as % of Wapati: Irr. 1 & 2	Area (See Map) 1	2	3	4	5	6	Rel Mat	T. Wt.	K. Wt.	Resistance to: Lodging	Shat-tering	Loose Smut	Bunt	Com. Rt. Rot
Frank	91	102	98	94	91	–	–	V-L	66	37	G	G	R	R	I
Wapiti	100	100	100	100	100	–	–	V-L	65	43	G	G	R	R	I

REMARKS: FRANK & WAPITI – late maturing and should not be grown for seed production in areas 5 and 6. WAPITI – Average yield is about 30% greater than Neepawa in areas of adaptation. BANJO – insufficient test data to describe, seed not available in 1992.

OTHER CEREAL CROPS

SPRING RYE – GAZELLE – only available spring variety and has maturity similar to Neepawa wheat.
OTHER WHEATS – BLUESKY & WILDCAT – eligible for Utility Wheat Grades only, yield 5% – 10% above Neepawa, and maturity similar to Neepawa.
WINTER TRITICALE – PIKA, TRILLIUM & WINTRI – yield similar to Norstar. Pika is similar in winter survival to Norstar, but Trillium and Wintri are 5%-10% lower.

Symbols used: *Denotes variety may not be described in 1993; – Denotes variety not generally suited to area; XX Denotes insufficient test data to describe.
Abbreviations used: Rel Mat=Relative maturity; V-L=Very-late, L=Late, M=Medium, E=Early; T. Wt.=Test weight (kg/hl); K. Wt.=Kernel weight (grams/1000 kernels); Ldg.=Lodging; Shat.=Shattering; Ex=Excellent, G = Good, F=Fair, P=Poor; Com. Rt. Rot=Common root rot; R=Resistant, I=Intermediate, S=Susceptible. Multiply kg/hl by 0.8 to get pounds per bushel.

OATS

Variety	Yield as % of Cascade: Irr. 1 & 2	Area (See Map) 1	2	3	4	5	6	Rel Mat	T. Wt.	K. Wt.	Resistance to: Ldg.	Shat.	Smuts
Athabasca	90	84	83	82	80	79	85	E	49	36	G	F	S
Calibre	100	106	101	98	94	97	95	L	50	36	F	G	S
Cascade	100	100	100	100	100	100	100	M-L	48	35	G	G	S
Derby	104	111	104	107	103	102	99	M-L	51	37	G	G	S
Foothill	89	93	88	93	85	87	85	L	48	31	F	G	S
Grizzly	95	91	90	91	91	91	93	L	49	36	F	G	S
Harmon*	94	93	91	94	87	89	85	M-L	49	34	G	G	R
Jasper	100	97	95	96	90	93	88	E	50	34	F	G	S
Robert	102	97	93	95	84	93	85	M-L	48	38	G	G	R
Waldern	107	107	106	103	103	105	110	M-L	46	43	G	G	S
HULL-LESS													
Terra*	71	80	73	71	75	73	71	E	54	29	G	G	S

REMARKS: ROBERT & TERRA – seed supply limited in 1992. CALIBRE, DERBY, JASPER & ROBERT – thin hull. JASPER - high protein. FOOTHILL – forage variety. ROBERT – red (tan) kernels. WALDERN – large kernal, use a higher seeding rate. Hull removal equals 20-25% less weight. AC MARIE & AC HILL – inadequate test data to describe, seed not available in 1992.

CANOLA

Variety	Irr. 1 & 2	Area (See Map) 1	2	3	4	5	6	Rel Mat	Straw Strenght	Comparitive Oil (%) Content	Resistance to: Black-leg	White Rust
	Yield as % of Tobin								POLISH TYPE *B. campestris*			
AC Parkland	98	88	94	100	86	99	95	E	F	+1.5	S	R
Colt	100	100	100	115	105	105	102	E	F	+1.6	S	S
Eldorado	99	104	100	105	106	103	101	E	F	+1.8	S	S
Gold Rush	XX	XX	XX	105	98	XX	XX	E	F	-0.2	S	R
Horizon	104	102	110	110	98	106	112	E	F	+1.3	S	S
Reward	XX	XX	XX	106	99	XX	XX	E	F	+1.9	S	R
Tobin	100	100	100	100	100	100	100	E	F	41.9	S	R
	Yield as % of Westar								ARGENTINE TYPE *B. napus*			
AC Excel	100	XX	XX	101	114	89	100	M-L	G	+0.3	I	R
AC Tristar	77	XX	XX	82	78	XX	XX	M-L	F	-1.0	V-S	R
Alto	97	105	108	103	115	102	101	M-L	F	0.0	V-S	R
Bounty	102	XX	XX	108	109	118	94	M-L	G	-1.0	S	R
Celebra	100	XX	110	113	122	–	–	M-L	G	-0.7	I	R
Delta	101	113	108	110	114	110	102	M-L	Ex	-0.8	I	R
Global	98	–	–	–	–	–	–	L	Ex	-1.6	I	R
Hyola 401	109	XX	XX	105	134	XX	XX	M-L	Ex	-0.3	S	R
Legend	96	114	111	107	105	101	101	M-L	G	-1.0	I	R
Pride HC 120	107	XX	XX	108	123	106	XX	M-L	Ex	+0.2	S	R
Profit	98	XX	102	99	99	100	82	M-L	F	+0.9	I	R
Stallion	81	XX	76	81	98	XX	XX	M-L	G	-2.5	I	R
Vanguard	98	XX	111	105	113	102	88	M-L	G	-1.3	I	R
Westar	100	100	100	100	100	100	100	M-L	F	44.3	V-S	R

REMARKS: Polish varieties, on average, yield 20% less and mature 2-3 weeks earlier than Argentine type. Argentine types shatter more readily than Polish when ripe and require early seeding in Areas 4, 5 & 6. Argentine canola is risky in Areas 5 and 6 because of late maturity. Mixtures of canola and mustard are inseparable and unacceptable. STALLION & AC TRISTAR – Triazaine resistant varieties. REWARD – seed supplies limited in 1992. In blackleg prone areas, do not grow varieties that are very susceptible to the disease.

To help prevent the spread of virulent blackleg to your farm, only use certified blackleg free and treated seed, in a minimum 4-year rotation.

Symbols used: *Denotes variety may not be described in 1993; – Denotes variety not well suited to the area; XX Denotes insufficient test data available.

Abbreviations used: Rel Mat=Relative maturity; L=Late, M-L=Medium-late, E=Early; T. Wt.=Test Weight (kg/hl); K. Wt.=Kernel weight(g/1000 kernels); Ldg.=Lodging; Shat=Shattering; Ex=Excellent, G=Good, F=Fair; Disease Resistance; V-S=Very susceptible, R=Resistant, I=Intermediate, S=Susceptible. Multiply kg/hl by 0.8 to get pounds per bushel.

FLAX

Variety	Yield as % of Noralta							Rel Mat	Seed Size	Rust Resistance
	Irr.	Area (See Map)								
	1 & 2	1	2	3	4	5	6			
Andro	101	108	102	95	105	112	97	M	M	R
Dufferin	95	96	84	81	92	91	82	L	M	R
MacGregor	112	110	106	109	107	110	101	L	S	R
Noralta	100	100	100	100	100	100	100	E	S	S
NorLin	107	97	105	90	108	97	103	M	M	R
NorMan	96	98	96	100	102	94	90	M	M	R
Vimy	98	109	103	86	102	101	99	M-L	L	R

REMARKS: SOMME & FLANDERS – Insufficient test data to describe, limited seed available in 1992.

Abbreviations used: Rel Mat=Relative maturity; L=Late, M-L=Medium-late, M=Medium, E=Early; Seed size, S=Small, M=Medium, L=Large; Rust Resistance R=Resistance, S=Susceptible;